

Data Being Collected



MEASUREMENT	METHOD	ANALYSIS
Gravimetric Water Content (GWC)	60 °C for 48 hours or until no change in mass	EMSL
Microbial Biomass C and N	Chloroform fumigation	EMSL
pH	1:1 soil water ratio	EMSL
Soil Pore Network Structure*	X-ray Computed Tomography Low resolution (~70 µm) scan High resolution (~30 µm) scan	EMSL
Water Extractable Organic Matter (WEOM) Mineral-Associated Organic Matter (MAOM) in 0.5M HCl	FT-ICR-MS (Solid Phase Extraction; Scimax 2xR 7T) Shimadzu TOC/TN analyzer	EMSL
Nitrogen Concentration (NO ₃ ⁻ and NH ₄ ⁺)	0.5 M K ₂ SO ₄ Extraction; Colorimetric	EMSL extractions; External partners
Phosphorus Concentration (Ortho-P)	Bray/Olsen Method	EMSL extractions; External partners
Geochemistry – K, SO ₄ ²⁻ , B, Zn, Mn, Cu, Fe, Ca, Mg, Na; Total Bases; Cation Exchange Capacity	Ca, Mg, Na, K – S-5.1 (Ammonium Acetate Method) Zn, Mn, Cu, Fe, B, SO ₄ ²⁻ – S6.11 (DPTA Extraction) S-10.10 (Ammonium Replacement Method)	External partners
Metagenomics	Illumina NovaSeq	Joint Genome Institute
Potential Enzyme Activity (β-glucosidase)	Colorimetric Assay	External partners
Respiration	CO ₂ Burst, 24 hrs; Method under development for rate kinetics	External partners
Texture	Hydrometer	External partners
Total C and N	AOAC 972.3 AOAC 990.3	External partners

* Data generation may require six months